

**In the Claims:**

Please cancel claims 1-4, 17-21, 28-31, and 44-48. Please amend claims 5, 12-14, 16, 22, 24-25, 27, 32, 39-41, 43, 49, 51-52, and 54. The claims are as follows:

1-4. (Canceled)

5. (Currently amended) A method for managing contract data, comprising:

receiving a contract datagroup  $D_G$  by a decentralized execution system (DES) from a procurement contract management system (PCMS) over a data path within a computer network, said contract datagroup  $D_G$  selected from the group consisting of a contract dataset and a contract deltadataset, said contract datagroup  $D_G$  identifying  $N$  purchase items purchasable from a vendor  $V$  keyed to the contract datagroup  $D_G$ , said  $N$  being an integer of at least 1, said contract datagroup  $D_G$  identifying the vendor  $V$  if the contract datagroup  $D_G$  is the contract dataset, said DES comprising a relational database that includes contract datasets, vendor datasets having vendors, and purchase item datasets having purchase items;

determining which, if any, of the  $N$  purchase items identified in the contract datagroup  $D_G$  match a purchase item in the purchase item datasets and determining a total number  $K$  of such purchase items in  $D_G$  that do not so match a purchase item in the purchase item datasets, said  $K$  being an integer satisfying  $0 \leq K \leq N$ ; and if  $K < N$  then

if the contract datagroup  $D_G$  is the contract dataset then determining whether the vendor  $V$  matches a vendor in the vendor datasets and if the vendor  $V$  so matches a vendor in the vendor datasets then adding a subset of  $D_G$  to the relational database, said subset of  $D_G$  excluding the  $K$

purchase items from  $D_G$ , else

if the contract datagroup  $D_G$  is the contract deltadataset and  $D_G$  is keyed to a first contract dataset in the relational database then adding to the first contract dataset in the relational database a remaining  $N-K$  purchase items of  $D_G$ .

6. (Original) The method of claim 5, wherein the DES further comprises a special database that includes contract datasets, wherein the contract datagroup  $D_G$  is the contract deltadataset, and wherein if  $K > 0$  then said method further comprising:

if  $D_G$  is keyed to a first contract dataset in the special database, then adding to the first contract dataset in the special database the  $K$  purchase items of  $D_G$ ; and

if  $D_G$  is not keyed to any contract dataset in the special database, then forming from  $D_G$  a contract dataset  $D_{C1}$  that includes the  $K$  purchase items and excludes the remaining  $N-K$  purchase items, and adding  $D_{C1}$  to the special database.

7. (Original) The method of claim 5, wherein if  $K < N$  and the contract datagroup  $D_G$  is the contract dataset and the vendor  $V$  does not match a vendor in the vendor datasets, then further comprising adding a vendor dataset  $D_V$  to the relational database when a contract based on the subset of  $D_G$  is required at the DES, said vendor dataset  $D_V$  keyed to the vendor  $V$ .

8. (Original) The method of claim 7, wherein adding  $D_V$  to the relational database comprises extracting  $D_V$  from a vendor database prior to adding  $D_V$  to the relational database.

9. (Original) The method of claim 7, wherein adding  $D_V$  to the relational database comprises:

communicating a message to a DES buyer keyed to at least one purchase item of the remaining N-K purchase items, each of said at least one purchase item matching a purchase item in the purchase item datasets, said message relating to adding  $D_V$  to the relational database; and

having the DES buyer cause  $D_V$  to be added to the relational database when the contract based on the subset of  $D_G$  is required at the DES.

10. (Original) The method of claim 5, wherein the contract datagroup  $D_G$  is the contract dataset.

11. (Original) The method of claim 5, wherein the contract datagroup  $D_G$  is the contract dataset.

12. (Currently amended) The method of claim 5, said PCMS being a ~~SAP~~ systems applications and products (SAP) system, said DES being a SAP system, said relational database being a SAP database.

13. (Currently amended) A method for managing contract data, comprising:

receiving a contract dataset  $D_C$  by a decentralized execution system (DES) from a procurement contract management system (PCMS) over a data path within a computer network, said contract dataset  $D_C$  identifying a vendor V and N purchase items purchasable from the vendor V, said N being an integer of at least 1, said DES comprising a relational database that includes contract datasets, vendor datasets having vendors, and purchase item datasets having

purchase items, said DES further comprising a special database that includes contract datasets;

determining which, if any, of the  $N$  purchase items identified in the contract dataset  $D_C$  match a purchase item in the purchase item datasets and determining a total number  $K$  of such purchase items in  $D_C$  that do not so match a purchase item in the purchase item datasets, said  $K$  being an integer satisfying  $0 \leq K \leq N$ ; and

if  $K = N$  then adding  $D_C$  to the special database, else if  $K < N$  then determining whether the vendor  $V$  matches a vendor in the vendor datasets and if the vendor  $V$  so matches a vendor in the vendor datasets then adding a first subset of  $D_C$  to the relational database and if  $K > 0$  adding a second subset of  $D_C$  to the contract datasets of the special database, said first subset of  $D_C$  excluding the  $K$  purchase items from  $D_C$ , said second subset of  $D_C$  excluding a remaining  $N-K$  purchase items from  $D_C$ .

14. (Currently amended) The method of claim 13, further comprising:

adding a new purchase item to the purchase item datasets;

determining whether the new purchase item is identified in a contract dataset  $D_{CS}$  of the special database; and

if the new purchase item is so identified in  $D_{CS}$  and  $D_{CS}$  identifies  $J$  purchase items such that  $J$  is an integer of at least 1, then determining whether a vendor identified in  $D_{CS}$  matches a vendor in the vendor datasets and if the vendor identified in  $D_{CS}$  so matches a vendor in the vendor datasets then:

if a contract identifier of  $D_{CS}$  matches a contract identifier of a first contract dataset in the relational database then adding the new purchase item to the first contract

dataset, else

if the contract identifier of  $D_{CS}$  does not matches a contract identifier of any contract dataset in the relational database then adding a subset of  $D_{CS}$  to the relational database, said subset of  $D_{CS}$  including the new purchase item; and

if  $J = 1$  then deleting  $D_{CS}$  from the special database else deleting the new purchase item from  $D_{CS}$ .

15. (Original) The method of claim 14, further comprising extracting the new purchase item from a purchase item database prior to adding the new purchase item to the purchase item datasets.

16. (Currently amended) The method of claim 13, said PCMS being a SAP systems applications and products (SAP) system, said DES being a SAP system, said relational database being a SAP database, said special database being a non-SAP database.

17-21. (Canceled).

22. (Currently amended) A method of contract archiving, comprising:

sending a list of  $I$  identifiers by a procurement contract management system (PCMS) to at least one decentralized execution system (DES) over a data path within a computer network, said  $I$  being an integer of at least 1, each identifier of the  $I$  identifiers identifying a contract dataset in the PCMS earmarked by the PCMS for archiving;

receiving by the PCMS a return list of  $M$  of the  $I$  identifiers from each DES of the at least

one DES in response to said sending, said M being an integer in a range of  $0 \leq M \leq I$ , said return list being DES-specific, each said contract dataset identified in the return list of each DES having been approved by said each DES for archiving; and

archiving by the PCMS each contract dataset identified in the list of I identifiers and appearing in an intersection list of the return lists, if the intersection list is not empty.

23. (Original) The method of claim 22, further comprising communicating by the PCMS to each DES of the at least one DES:

that the archiving was done by the PCMS for the contract datasets appearing in the intersect list, if the intersection list is not empty; or

that the archiving will not be done, if the intersection list is empty.

24. (Currently amended) The method of claim 22, said PCMS and each of the at least one DES being a SAP systems applications and products (SAP) system.

25. (Currently amended) A method of contract archiving, comprising:

receiving by a first decentralized execution system (DES) of at least one DES from a procurement contract management system (PCMS) over a data path within a computer network, a list of I identifiers, said I being an integer of at least 1, each identifier of the I identifiers identifying a contract dataset in the PCMS earmarked by the PCMS for archiving, said list of I identifiers sent by the PCMS to each DES of the at least one DES, said PCMS adapted to receive a return list of M of the I identifiers from each DES of the at least one DES in response to said

sending, said M being an integer in a range of  $0 \leq M \leq I$ , said return list being DES-specific, each said contract dataset identified in the return list of each DES having been approved by said each DES for archiving, said PCMS adapted to archive each contract dataset identified in the suggest list and appearing in an intersection list of the return lists if the intersection list is not empty; and

sending by the first DES to the PCMS the return list of the first DES.

26. (Original) The method of claim 25, further comprising receiving by the first DES notification from the PCMS:

that the archiving was done by the PCMS for the contract datasets appearing in the intersect list, if the intersection list is not empty; or

that the archiving will not be done, if the intersection list is empty.

27. (Currently amended) The method of claim 25, said PCMS and each of the at least one DES being a SAP systems applications and products (SAP) system.

28-31. (Canceled)

32. (Currently amended) A system for managing contract data, comprising software at a decentralized execution system (DES), said software adapted to be executed by a processor comprised by the DES, said software adapted:

to have the DES receive a contract datagroup  $D_G$  from a procurement contract

management system (PCMS), said contract datagroup  $D_G$  selected from the group consisting of a contract dataset and a contract deltadataset, said contract datagroup  $D_G$  identifying  $N$  purchase items purchasable from a vendor  $V$  keyed to the contract datagroup  $D_G$ , said  $N$  being an integer of at least 1, said contract datagroup  $D_G$  identifying the vendor  $V$  if the contract datagroup  $D_G$  is the contract dataset, said DES comprising a relational database that includes contract datasets, vendor datasets having vendors, and purchase item datasets having purchase items;

to determine which, if any, of the  $N$  purchase items identified in the contract datagroup  $D_G$  match a purchase item in the purchase item datasets and to determine a total number  $K$  of such purchase items in the  $D_G$  that do not so match a purchase item in the purchase item datasets, said  $K$  being an integer satisfying  $0 \leq K \leq N$ ; and if  $K < N$  then

if the contract datagroup  $D_G$  is the contract dataset then to determine whether the vendor  $V$  matches a vendor in the vendor datasets and if the vendor  $V$  so matches a vendor in the vendor datasets then to add a subset of  $D_G$  to the relational database, said subset of  $D_G$  excluding the  $K$  purchase items from  $D_G$ , else

if the contract datagroup  $D_G$  is the contract deltadataset and said contract deltadataset is keyed to a first dataset in the relational database then to add to the first dataset a remaining  $N-K$  purchase items of the contract datagroup  $D_G$ .

33. (Original) The system for managing contract data of claim 32, wherein the DES further comprises a special database that includes contract datasets, wherein the contract datagroup  $D_G$  is the contract deltadataset, and wherein if  $K > 0$  then said software is further adapted:

if  $D_G$  is keyed to a first contract dataset in the special database, then to add to the first



contract dataset in the special database the K purchase items of  $D_G$ ; and

if  $D_G$  is not keyed to any contract dataset in the special database, then to form from  $D_G$  a contract dataset  $D_{C1}$  that includes the K purchase items and excludes the remaining N-K purchase items, and to add  $D_{C1}$  to the special database.

34. (Original) The system for managing contract data of claim 32, wherein if  $K < N$  and the contract datagroup  $D_G$  is the contract dataset and the vendor V does not match a vendor in the vendor datasets, then said software is further adapted to have a vendor dataset  $D_V$  added to the relational database when a contract based on the subset of  $D_G$  is required at the DES, said vendor dataset  $D_V$  keyed to the vendor V.

35. (Original) The system for managing contract data of claim 34, wherein said software is further adapted to have the vendor dataset  $D_V$  extracted from a vendor database prior to having  $D_V$  added to the relational database.

36. (Original) The system for managing contract data of claim 34, wherein to have the vendor dataset  $D_V$  added to the relational database comprises:

to communicate a message to a DES buyer keyed to at least one purchase item of the remaining N-K purchase items, each of said at least one purchase item matching a purchase item in the purchase item datasets, said message relating to adding  $D_V$  to the relational database; and

to have the DES buyer cause  $D_V$  to be added to the relational database when the contract based on the subset of  $D_G$  is required at the DES.

37. (Original) The system for managing contract data of claim 32, wherein the contract datagroup  $D_G$  is the contract dataset.

38. (Original) The system for managing contract data of claim 32, wherein the contract datagroup  $D_G$  is the contract deltadataset.

39. (Currently amended) The system for managing contract data of claim 32, said PCMS being a SAP system, said DES being a SAP systems applications and products (SAP) system, said relational database being a SAP database, said software being non-SAP software.

40. (Currently amended) A system for managing contract data, comprising software at a decentralized execution system (DES), said software adapted to be executed by a processor comprised by the DES, said software adapted:

to have the DES receive a contract dataset  $D_C$  from a procurement contract management system (PCMS), said contract dataset  $D_C$  identifying a vendor  $V$  and  $M$  purchase items purchasable from the vendor  $V$ , said  $M$  being an integer of at least 1, said DES comprising a relational database that includes contract datasets, vendor datasets having vendors, and purchase item datasets having purchase items, said DES further comprising a special database that includes contract datasets;

to determine which, if any, of the  $N$  purchase items identified in the contract dataset  $D_C$  match a purchase item in the purchase item datasets and to determine a total number  $K$  of such purchase items in the  $D_C$  that do not so match a purchase item in the purchase item datasets, said

K being an integer satisfying  $0 \leq K \leq N$ ; and

if  $K = N$  then to add  $D_C$  to the special database, else if  $K < N$  then to determine whether the vendor V matches a vendor in the vendor datasets and if the vendor V so matches a vendor in the vendor datasets then to add a first subset of  $D_C$  to the relational database and if  $K > 0$  to add a second subset of  $D_C$  to the contract datasets of the special database, said first subset of  $D_C$  excluding the K purchase items from  $D_C$ , said second subset of  $D_C$  excluding a remaining  $N-K$  purchase items from  $D_C$ .

41. (Currently amended) The system for managing contract data of claim 40, wherein said software is further adapted:

to add a new purchase item to the purchase item datasets;

to determine whether the new purchase item is identified in a contract dataset  $D_{CS}$  of the special database; and

if the new purchase item is so identified in  $D_{CS}$  and  $D_{CS}$  identifies J purchase items such that J is an integer of at least 1, then to determine whether a vendor identified in  $D_{CS}$  matches a vendor in the vendor datasets, and if the vendor identified in  $D_{CS}$  so matches a vendor in the vendor datasets then:

if a contract identifier of  $D_{CS}$  matches a contract identifier of a first contract dataset in the relational database then to add the new purchase item to the first contract dataset, else

if the contract identifier of  $D_{CS}$  does not matches a contract identifier of any contract dataset in the relational database then to add a subset of  $D_{CS}$  to the relational

database, said subset of  $D_{CS}$  including the new purchase item; and

if  $J = 1$  then to delete  $D_{CS}$  from the special database else to delete the new purchase item from  $D_{CS}$ .

42. (Original) The system for managing contract data of claim 41, wherein said software is further adapted to extract the new purchase item from a purchase item database prior to adding the new purchase item to the purchase item datasets.

43. (Currently amended) The system for managing contract data of claim 40, said PCMS being a SAP systems applications and products (SAP) system, said DES being a SAP system, said relational database being a SAP database, said special database being a non-SAP database, said software being non-SAP software.

44-48. (Canceled)

49. (Currently amended) A system for contract archiving, comprising a procurement contract management system (PCMS) having software, said software adapted to be executed by a processor comprised by the PCMS, said software adapted:

to send a list of I identifiers to at least one decentralized execution system (DES), said I being an integer of at least 1, each identifier of the I identifiers identifying a contract dataset in the PCMS earmarked by the PCMS for archiving;

to receive a return list of M of the I identifiers from each DES of the at least one DES in

response to having sent the list of I identifiers to each said DES, said M being an integer in a range of  $0 \leq M \leq I$ , said return list being DES-specific, each said contract dataset identified in the return list of each DES having been approved by said each DES for archiving; and

to archive each contract dataset identified in the list of I identifiers and appearing in an intersection list of the return lists, if the intersection list is not empty.

50. (Original) The system for contract archiving of claim 49, said software further adapted to communicate to each DES of the at least one DES:

that the archiving was done by the PCMS for the contract datasets appearing in the intersect list, if the intersection list is not empty; or

that the archiving will not be done, if the intersection list is empty.

51. (Currently amended) The system for contract archiving of claim 49, said PCMS and each of the at least one DES being a SAP systems applications and products (SAP) system, said software being non-SAP software.

52. (Currently amended) A system for contract archiving, comprising a first decentralized execution system (DES) of at least one DES, said first DES having software, said software adapted to be executed by a processor comprised by the first DES, said software adapted:

to receive from a procurement contract management system (PCMS) a list of I identifiers, said I being an integer of at least 1, each identifier of the I identifiers adapted to identify a contract dataset in the PCMS earmarked by the PCMS for archiving, said list of I identifiers

adapted to be sent by the PCMS to each DES of the at least one DES, said PCMS adapted to receive a return list of M of the I identifiers from each DES of the at least one DES in response to having sent the list of I identifiers to each said DES, said M being an integer in a range of  $0 \leq M \leq I$ , said return list being DES-specific, each said contract dataset identified in the return list of each DES having been approved by each said DES for archiving, said PCMS adapted to archive each contract dataset identified in the list of I identifiers and appearing in an intersection list of the return lists if the intersection list is not empty; and

to send to the PCMS the return list of the first DES.

53. (Original) The system for contract archiving of claim 52, said software further adapted to receive notification from the PCMS:

that the archiving was done by the PCMS for the contract datasets appearing in the intersect list, if the intersection list is not empty; or

that the archiving will not be done, if the intersection list is empty.

54. (Currently amended) The system for contract archiving of claim 52, said PCMS and each of the at least one DES being a SAP systems applications and products (SAP) system, said software being non-SAP software.

55. (Canceled)